

NEW SPECIES OF THE GENUS *SCIATROPHES* BLACKBURN  
FROM ARIZONA (COLEOPTERA: SCAPHIDIIDAE)

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ABSTRACT

The following 2 species of *Sciatrophes* Blackburn (Scaphidiidae), both from Arizona, are described as new: *S. flagellata* (Pinaleno Mts., Chiricahua Mts., and Huachuca Mts.), and *S. valida* (Pinaleno Mts.). *Baeocera irregularis* Champion 1913, here transferred to *Sciatrophes* Blackburn, is reported from the United States for the first time.

Among the numerous scaphidiids collected by Dr. Ales Smetana, Ottawa, in the mountains in southeastern Arizona, of special interest are specimens of 3 large, conspicuous species of the genus *Sciatrophes*. Two of these species, *S. flagellata* n. sp. and *S. valida* n. sp., belong to the *congener*-group. This group includes some species which are difficult to distinguish; since Cornell (1967) overlooked important taxonomic characters, re-examination of the type-material of several species of this group was necessary.

The genus *Sciatrophes* is better known as *Eubaeocera* Cornell or *Baeocera* Erichson. Cornell's placement of *Baeocera* Erichson in synonymy with *Cyparium* Erichson and consequent replacement of the former by *Eubaeocera* was incorrect. The type species of *Baeocera* is by monotypy *Scaphidium concolor* F., a senior synonym of *Cyparium flavipes* LeC. (Achard 1920:307). The original material of *S. concolor* is apparently lost, but a specimen named by Erichson as *Baeocera concolor* and another from Mexico mentioned by Erichson as related to *B. concolor* are preserved in the Berlin Museum. They agree well enough with published data to prove that Erichson (1845:4) misidentified the species in question, although the former specimen was carelessly dissected and is in very poor condition; both are very distinct from *Cyparium*, the former most probably and the latter indubitably congeneric with species placed in *Eubaeocera*. Therefore it would have been better to apply the Code (article 70, a ii) than to establish the new name *Eubaeocera*, which is a subjective junior synonym of *Sciatrophes* Blackburn (Löbl, 1977). I referred this case to the Commission; awaiting its judgement I use *Sciatrophes* as the valid name.

The following abbreviations as used in the text refer to the material studied:

CNC = Canadian National Collection, Ottawa, Canada

MG = Muséum d'Histoire naturelle, Geneva, Switzerland

The length of each species is measured from the middle of the apical pronotal margin to the inner apical angle of the elytra. The 1st visible abdominal sternite is considered as the 1st sternite.

I wish to thank my colleagues Dr. K. V. Krombein and Dr. T. L. Erwin (The United States National Museum of Natural History, Smithsonian Institution, Washington, D.C.) for allowing me to examine the type-material I needed for this study. I also wish to thank my friend, Dr. A. Smetana, Entomology Research Institute, Ottawa, for submitting material for study and for letting me retain several of these specimens from the material studied.

*Sciatrophes flagellata* Löbl, new species

Very similar to *S. securiforma* (Cornell) externally. Black or brownish-black. Antennae as in Fig. 1. Pronotum at base 1.31-1.41 mm wide, microsculpture usually somewhat less distinct than in *S. securiforma*. Elytra at suture 1.46-1.63 mm long, at widest point together 1.48-1.61 mm wide; elytral punctation somewhat coarser than in *S. securiforma*. Pygidial punctation finer and sparser than in *S. securiforma*. Metepisterna narrower, at widest point hardly 0.09 mm wide, straight and narrowed proximally, punctation of inner suture denser. Middle portion of metasternum somewhat more convex. Tibiae stouter; mesotibiae 0.61-0.67 mm long, somewhat curved; metatibiae 0.80-0.88 mm long, slightly curved. Metatarsi 0.51-0.54 mm long. *Male*:

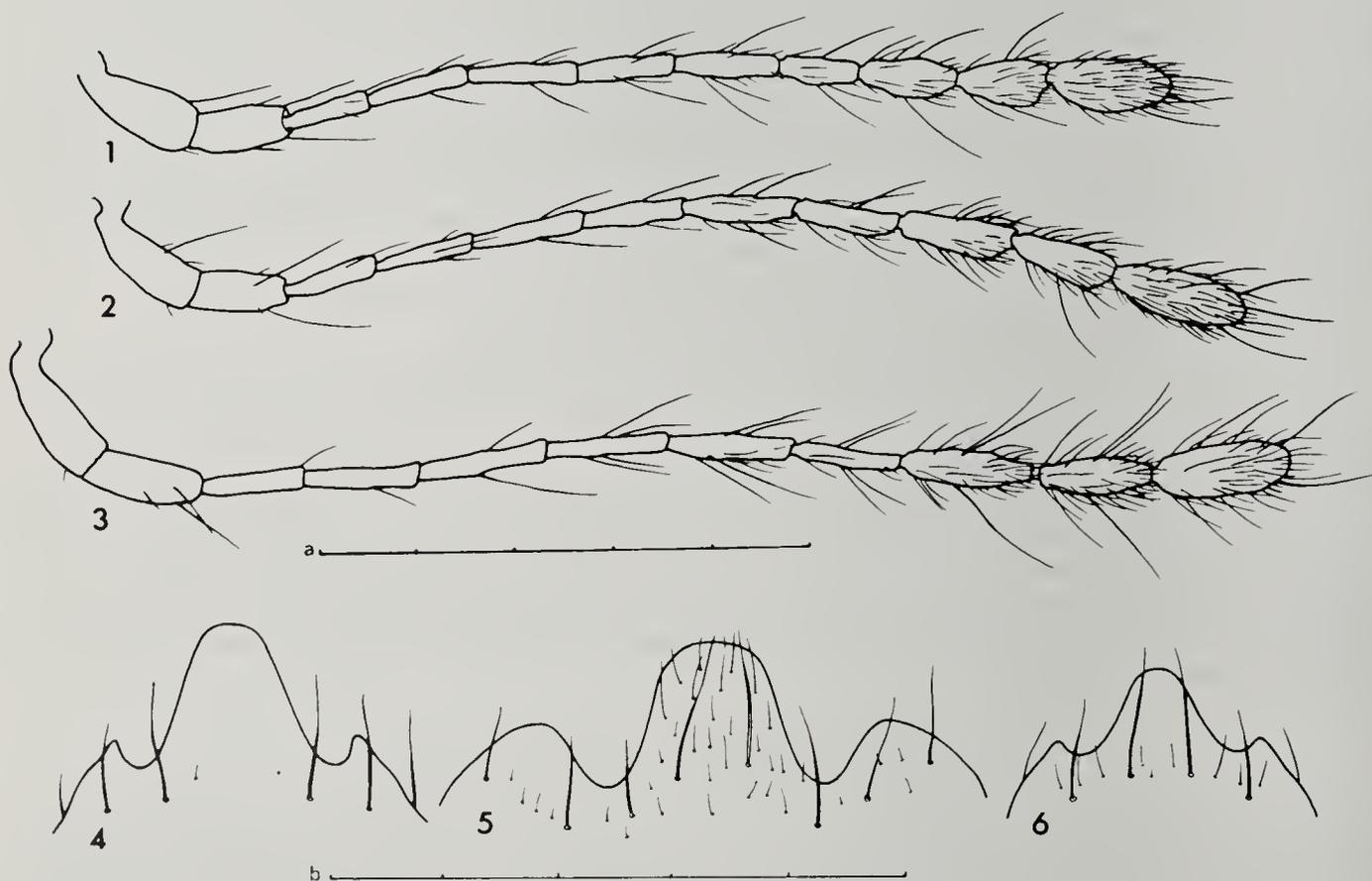
Segments 1-3 of protarsi and segments 1-2 of mesotarsi strongly enlarged; apical margin of sixth sternite (Fig. 4) strongly produced medially (not so in *S. securiforma*); aedoeagus as in Figs. 7 and 8, strongly sclerotized, 1.23-1.26 mm long. Length 2.4-2.55 mm.

**Type-material.** Holotype (male): Arizona: Graham Co., Pinaleno Mts., Wet Cn, 6100', 29-VII-69, A. Smetana coll. In the Canadian National Collection, Ottawa (CNC No. 13087). *Paratypes*: same data as holotype, 2 males, 9 females (CNC, MG); Pinaleno Mts., Turkey Flat, 7200', 27-VII-69, 1 female (CNC); Chiricahua Mts., East Turkey Crk., 7 mi W Portal, 22-VII-69, 3 males, 4 females (CNC, MG); Cochise Co., Huachuca Mts., Miller Cn., 5500', 1-VIII-69, 1 male, 2 females (CNC, MG); same data, 6500-7000', 1 female (MG).

**Bionomics.** The series from Wet Cn., Pinaleno Mts., was collected by sifting very deep, moist, and partially mouldy layers of rotten leaves accumulated at the base of high vertical rock walls. The remaining specimens were mostly taken by sifting deeper and more or less wet layers of fallen leaves on the forest floor.

**Discussion.** *Sciatrophes flagellata* belongs to the *congener*-group which previously included 5 species: *S. deflexa* (Casey), *S. congener* (Casey), *S. securiforma* (Cornell), *S. youngi* (Cornell) and *S. cerbera* (Cornell). The aedoeagus of *S. flagellata* which is similar in structure to that of *S. deflexa* but differs drastically from those of the other 4 species. In *S. deflexa*, however, the parameres are shorter and expanded in basal half (lateral view), the median lobe is only slightly produced above the base of the paramere, and the sclerites of the internal sac, especially the flagellum, are differently shaped. *S. deflexa* is distinguished from all other species of the group by the form of the elytral sutural stria, which is reduced in front and therefore not connected with the lateral stria.

In all specimens of *S. flagellata* and *S. securiforma* examined, the scutellum is completely covered by the pronotum. Cornell (1967:4, 13) described the scutellum as visible and wide in *S. securiforma*, but after I cleaned the surface of the holotype (the species was described from a single specimen) the apparent outlines of the scutellum disappeared.



Figs. 1-3, Antennae: 1, *Sciatrophes flagellata* n. sp., paratype from East Turkey Crk.; 2, *S. valida* n. sp., paratype from Wet Cn.; 3, *S. irregularis* (Champ.), from Ash Cn.; scale a = 0.5 mm.

Figs. 4-6, Sixth male sternite: 4, *S. flagellata*, paratype from East Turkey Crk.; 5, *S. valida*, paratype from Wet Cn.; 6, *S. irregularis*, from Ash Cn.; scale b = 0.5 mm.

*Sciatrophes valida* Löbl, new species

Rather similar to *S. securiforma* externally. Black or brownish-black; elytra often paler, apical half usually dark brown. Antennae as in Fig. 2. Pronotum at base 1.26-1.34 mm wide; lateral margins near basal angles straight, convergent proximally; apical pronotal margin comparatively wide; apical marginal stria complete, deepened behind angles; pronotal surface without microsculpture, punctation somewhat more distinct than in *S. securiforma*. Apical portion (rarely only apical margin) of scutellum visible. Elytra at suture 1.42-1.54 mm long, at widest point together 1.44-1.56 mm wide, their contours as in *S. deflexa* widened distally in basal fourth, then straight and feebly narrowed towards apical third, in apical third more distinctly narrowed, almost straight and convergent towards apex; sutural margin in front not or hardly elevated; interval between suture and sutural stria flat, bearing rather irregular row of punctures; sutural stria as in *S. securiforma*, connected with lateral stria in front but more densely and coarsely punctate; elytral punctation coarser than in *S. securiforma*. Pygidium as in *S. flagellata*, punctation sparser and finer than in *S. securiforma*. Mesepimera slightly more than twice as long as distance between them and mesocoxae. Smooth middle portion of metasternum narrower than in *S. securiforma*, bordered both laterally and posteriorly by dense, coarse punctation; mediobasal metasternal impressions very shallow; metasternal margin between metacoxae straight, punctation of lateral portions of metasternum very fine. Metepisterna convex, at widest point up to 0.14 mm wide, slightly and gradually narrowed proximally; inner metepisternal suture deep and furrowlike, not punctate, rounded apically, otherwise straight. First sternite with a basal row of oblong punctures, surface without microsculpture, very finely punctate. Meso- and metatibiae stout (as in *S. securiforma*) and somewhat curved; mesotibiae 0.61-0.69 mm, metatibiae 0.77-0.85 mm long. Metatarsi 0.58-0.65 mm long. *Male*: Tarsal segments enlarged in similar way as in *S. flagellata*; apical margin of sixth sternite as in Fig. 5; aedeagus (Figs. 9 and 10) 1.18-1.26 mm long, strong, sclerites of internal sac very strongly sclerotized in part. *Length* 2.25-2.40 mm.

**Type-material.** Holotype (male): Arizona: Graham Co., Pinaleno Mts., Wet Cn., 6100', 29-VII-69, A. Smetana coll. In the Canadian National Collection, Ottawa (CNC No. 13088). *Paratypes*: same data as holotype, 5 males, 3 females (CNC, MG).

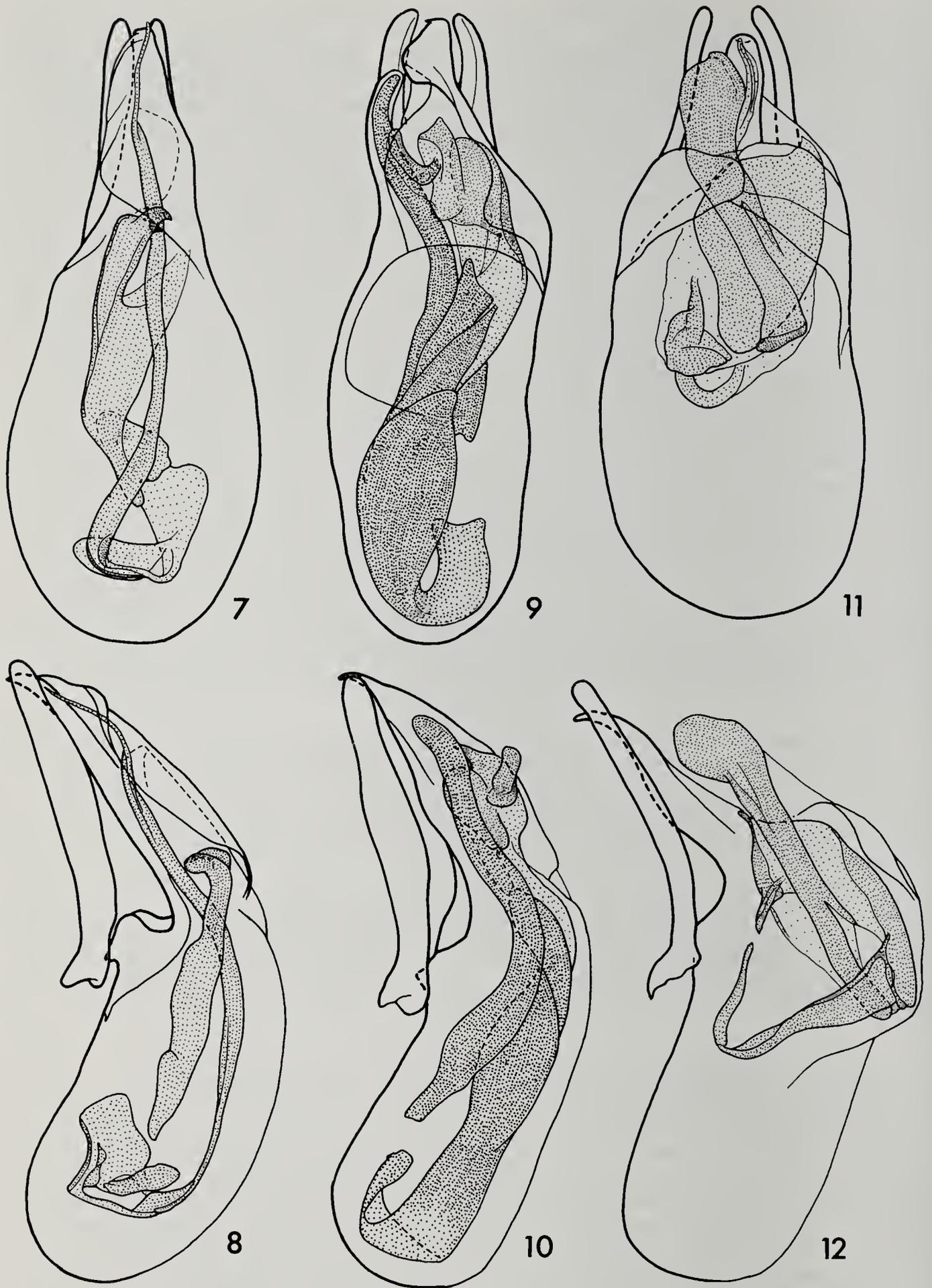
**Bionomics.** All specimens of the original series were collected together with *S. flagellata* by sifting deep, moist, and partially mouldy layers of rotten leaves accumulated at the base of high vertical rock walls.

**Discussion.** *S. valida* is well characterized among related species by the shape of male copulatory organ. In external characters it differs from *S. securiforma* mainly by the pronotal surface which lacks microsculpture, by the partially visible scutellum, by the shape of the elytra, and by the different punctation of the pygidium, metasternum, and elytra. It differs from *S. flagellata* by the more slender tibiae and longer metatarsi, less distinctly by the different punctation of the body surface.

*Sciatrophes irregularis* (Champion), new combination

*Baeocera irregularis* Champion 1913:70. Holotypus female: Mexico, Omilteme (British Museum, Natural History, London).

Form strongly convex. Head and pronotum black or brownish-black, pronotal base in specimens from Arizona more or less dark reddish, elytra dark brown or dark reddish-brown, legs paler reddish-brown. Antennae as in Fig. 3. Pronotum at base 1.16-1.20 mm wide, strongly narrowed in front, apical margin of pronotum less than half as wide as basal margin; lateral margins rather evenly rounded; lateral keel in dorsal view complete (holotype), or obsolescent except for short middle portion (Arizona specimens); stria of apical margin fine and complete; pronotal surface without microsculpture, punctation very fine, barely visible at magnification 25 times. Scutellum completely covered by pronotum. Elytra at suture 1.38-1.48 mm long, at widest point together 1.32-1.38 mm wide, widened distally in basal fourth, more or less parallel-sided at middle, slightly narrowed behind middle, distinctly narrowed in apical third to rounded apical margin; interval between suture and sutural stria strongly angularly elevated (holotype) or almost flat with sutural margin slightly raised; row of punctures laterad to sutural margin fine; sutural stria deep, curved in front obliquely towards outer fourth of basal elytral margin and connected with lateral stria; elytral punctation in basal half dense and decidedly



Figs. 7-12, Aedeagi, dorsal and lateral view: 7 and 8, *S. flagellata* n. sp., paratype from East Turkey Crk.; 9 and 10, *S. valida* n. sp., paratype from Wet Cn.; 11 and 12, *S. irregularis* (Champ.), from Ash Cn.

coarse, here and there (not laterally) coarse punctures extend beyond middle, punctation of apical half otherwise very fine. (In holotype punctation of apical half of elytra appears distinctly sparser, finer, and more irregular than in specimens from Arizona). Mesepimera slightly more than twice as long as distance between them and mesocoxae. Middle portion of metasternum slightly (holotype) or barely elevated, without impressions; narrow oblong middle portion smooth, rest of surface coarsely and closely punctate. (In holotype smooth middle portion of metasternum wider, punctation of surface finer and sparser than in specimens from Arizona); metasternal margin between metacoxae slightly concave (holotype) or straight; punctation of lateral portions of metasternum extremely fine and very sparse. Metepisterna rather narrow, convex and smooth, not (holotype) or only slightly convergent proximally and rounded apically; inner metepisternal suture deeply impressed, punctate. First sternite with a basal row of punctures which is widely interrupted medially and extends laterally to level of inner margin of metepimera; surface without microsculpture, punctation extremely fine and sparse. Tibiae slender and straight; mesotibiae 0.55-0.58 mm, metatibiae 0.68-0.72 mm long. Metatarsi 0.56-0.62 mm long. *Male*: Segments 1-3 of protarsi and segments 1-2 of mesotarsi strongly enlarged; apical margin of sixth sternite as in Fig. 6; aedoeagus as in Figs. 11 and 12, strongly sclerotized, 0.92 mm long. *Length* 2.0-2.15 mm.

**Material examined.** Holotype (female) labelled "Omiteme, Guerrero. 8000 ft. Aug. H.H.Smith"/"1911-403"/"Type" (red)/"Baeocera irregularis Ch." (in handwriting)/"Tr.Ent.Soc.L.1913. det. Champion". *Arizona*: Huachuca Mts., Ash Cn., 5000', 2-VIII-69, 1 male and 2 females; Santa Rita Mts., Madera Cn., 5500', 3-VIII-69, 1 female (CNC, MG).

**Bionomics.** Specimens from Arizona were collected by sifting more or less moist layers of fallen leaves in a dry creek bed, and along a small running creek in the deciduous forest.

**Discussion.** *S. irregularis* was known previously only from the single original specimen from Mexico. As there are some differences between the holotype and the specimens from Arizona, and as the holotype is a female, the association of Arizonan specimens with this name is tentative pending study of additional males from Mexico.

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